EXHIBIT B

UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

Singular Computing LLC,	)))	Civil Action No. 1:19-cv-12551
Plaintiff,	))))	
v.	))	
Google LLC,	)))	
Defendant.	))	**JURY TRIAL DEMANDED**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff, Singular Computing LLC ("Singular"), for its complaint against Defendant,

Google LLC, ("Google"), alleges as follows:

THE PARTIES

1.   Singular is a Delaware limited liability company having its principal places of

business at 10 Regent Street, Newton, MA 02465 and The Cambridge Innovation Center, 1

Broadway, Cambridge, MA 02142.

2.   Google is a Delaware limited liability company and has regular and established

places of business in this District, including a major office complex in Cambridge,

Massachusetts with over 1,500 employees. Google may be served with process through its

registered agent, Corporation Service Company, 84 State Street, Boston, MA 02109.

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accumulate errors. Dr. Bates, however, conceived and made such a computer utilizing his novel and patented computer architectures.

12.   In some embodiments of Singular's patented computer architectures, LPHDR processing elements can be deployed within a computer in massively parallel configurations to further amplify their relatively higher efficiency. In still other exemplary configurations, massive numbers of these LPHDR processing elements can be deployed in conjunction with far smaller numbers of higher precision processing elements found within conventional computer architectures, to extend the range of software programs that can benefit from Singular's high-efficiency computing architecture.

13.   Singular's revolutionary approach to computer architecture is described in a provisional patent application entitled "Massively Parallel Processing with Compact Arithmetic Element" that was filed in June of 2009 and made public in June of 2010.

14.   After filing this seminal patent application, Singular under the direction of Dr. Bates built a computer incorporating its novel architecture. The Singular prototype was able to execute a software program that performed conventional neural network image classification, for example, at a rate 30 times faster than a conventional computer having comparable physical characteristics in terms of its number of transistors, its semiconductor fabrication process and power draw.

15.   As Singular was designing and building prototypes of its new computer, Google was belatedly recognizing the limitations of its conventional computer architectures in providing users with computer-based services such as Translate, Photos, Search, Assistant, and Gmail. According to Google, it was hurtling towards a "scary and daunting" situation. The situation arose as Google was starting to improve these services by running AI software

programs on its computers, and as those services consequently became more popular. According to Google, it was "scary and daunting" because the new AI software programs being run on the computers in its data centers required far more computer operations per period than the software programs Google was previously executing. For example, by its own estimation, Google would have to at least double its computing footprint just to keep up with the increased computer requirements being driven by improved AI-based speech recognition services alone. Google realized it needed Dr. Bates' computer architectures to solve this "daunting" situation.

16.   Google's infringement of U.S. Patents 8,407,273 and 9,218,156 is willful.

17.   Less than 2 years after the filing of the provisional application, Dr. Bates and Google executed a non-disclosure agreement (NDA) prepared by Google.

18.   After the filing of the provisional patent application, Dr. Bates met with representatives from Google more than three times prior to early 2017.

19.   During the course of these meetings, Dr. Bates disclosed his computer architectures and prototype. Dr. Bates also advised Google such was patent-protected.

20.   Google knew or should have known of the '273 and '156 patents prior to the launch of the accused Cloud Tensor Processing Unit Version 2 (TPUv2 Device) in May 2017.

Cloud TPU

When you request one "Cloud TPU v2" on Google Cloud Platform, you get a virtual machine (VM) which has a PCI-attached TPU board. The TPU board has four dual-core TPU chips. Each TPU core features a VPU (Vector Processing Unit) and a 128x128 MXU (Matrix multiply Unit). This "Cloud TPU" is then usually connected through the network to the VM that requested it. So the full picture looks like this:
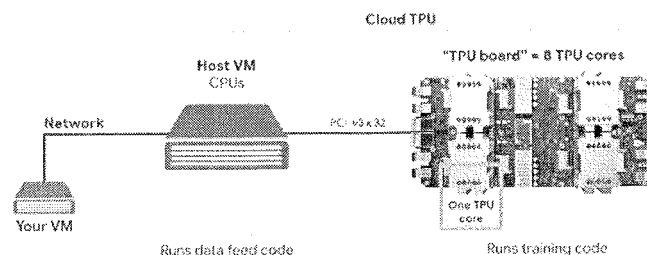
E.   award Plaintiffs such other and further legal and equitable relief as the Court may deem just and proper.

DEMAND FOR JURY TRIAL

Plaintiff demands a trial by jury on all counts of the complaint.

Dated: December 20, 2019   Respectfully submitted,

                                            /s/ Paul J. Hayes
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                                            ATTORNEYS FOR THE PLAINTIFF